



# WIIPA MAGAZINE

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# WIIPA MAGAZINE



**Dear Valued Readers,**

WIIPA is a prestigious association dedicated to promoting innovation, protecting intellectual property rights, and fostering a global community of inventors, researchers, and enthusiasts.

In line with WIIPA's mission to spread the spirit and culture of inventions, we are delighted to announce that WIIPA has generously granted the right to use the topics and contents of this magazine freely. This permission is extended to all readers, provided that the use of the material is for personal, educational, or non-commercial purposes, and that the source is properly attributed.

By granting this right, WIIPA aims to facilitate the sharing of knowledge, inspire creativity, and encourage dialogue around the exciting world of inventions. We encourage you to make the most of this opportunity by engaging with the content, sharing it with others, and taking part in the global conversation about innovation and invention.

As you delve into the pages of this magazine, we hope that you find inspiration, insight, and connection. Thank you for joining us in celebrating the world of inventions and the incredible potential of the human spirit.

Sincerely,

The Editorial Team  
WIIPA Magazine

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# WIIPA

## World Invention Intellectual Property Associations

A non-profit global organization. In 2010, it was founded by Mr. Hsieh Hsin-Ming. For a decade, WIIPA has been using Taiwan as its headquarter. At the moment, 50 member countries and partners have joined the “WIIPA Family” with the goal of promoting invention, innovation, and intellectual property rights around the globe. Promoting cooperation between associations, inventors, and enterprises of various countries. Inspiring creativity and innovation of potential inventors both local and international. Meanwhile, strengthening the global application development in the field of intellectual property rights.

## History

In 2000, Mr. Hsieh Hsin- Ming felt that the main axis of TIPPA is limited to Taiwan. With a vision to gain access in the international stage, he dedicated his time and effort to gather transnational forces to put his vision at work. Fueled with a vibrant ideology, he continued to open doors of opportunities for young and talented inventors to a global level and thrived on gaining international attention for the establishment of WIIPA as a multinational organization.



# Founder

Since 1993, Mr. Hsieh Hsin- Ming has formed "Taiwan Invention Products Promotion Association (TIPPA)" with many friends from the Taiwanese invention community. He has led many Taiwanese brand groups to participate in international invention exhibitions, covering Southeast Asia and European countries. Successfully, opened up a way for Taiwan's products to be in line with international standards, and also laid the foundation for the establishment of WIIPA.



## President Manli Hsieh

In 2018, Manli Hsieh took over the post of President of the World Invention Intellectual Property Associations (WIIPA). For four years, she has maintained the tradition of WIIPA, actively held exhibitions, assisted every facet of the invention circle, and worked hard for invention education. In addition, her commitment in structuring a WIIPA historical database through compilation of data accumulated over years of experience is immensely vital for WIIPA's legacy in the realm of invention innovation.

Back in 2001, the development of Taiwan Invention Products Promotion Association (TIPPA), whose father Hsin-Ming Hsieh was the chairman, became more and more stable. At that time, Manli Hsieh had served in TIPPA marketing and financial management positions for many years and accumulated rich industry experience; in 2013, Manli Hsieh on behalf of the association, a total of 249 inventions, 95 units, and 396 people from Taiwan participated in the Malaysian Invention Exhibition. In the era when the international community's impression of Taiwan still remained in the "OEM kingdom", the success of the exhibition triggered local media reports and established Taiwan as the new image of "innovative development" and has also made the "invention" industry begin to receive the attention of the Taiwanese government.

Taking into account her father's ideals and commitment to the affairs of the association, she also set clear goals for herself, including: "enhancing the international voice of member states" by grasping the strengths and weaknesses, Complete high-quality exhibitions to "strengthen their international reputation of member countries", and regularly hold meetings to "build deep friendship between member countries." Manli Hsieh regards the member state partners as a "WIIPA family", and treats each other with the family's heart and utmost support. Until today (2023), WIIPA member states and partners have grown to a total of 50.

Manli Hsieh is also an invention educator and curator. Because of her broad vision, she has been invited to serve as a guest professor and as a lecturer at many colleges and universities, and she often serves as a judge in competitions. Besides theoretical teaching, she tries to use her own experience, combining invention and curatorial majors, to guide inventors on how to stand out and become the highlight in the exhibition.



“

In my mind, "invention" is not just the end product. Most importantly, invention is the innovative approach to a new idea. As a leader, I hope that I will not follow or copy the success of others, but have continuous Innovative thinking, development of efficient and unique leadership methods. I am proud, of the friendship developed by the WIIPA Family through years of cooperation and hard work. Problems always make us more united! Thank you, all WIIPA members and partners!

”

## Mission

Provide services such as academic counseling for its members and universities (local and international) on invention- related matters, effective communication, patents, and its related field of intellectual property.

Engage members as well as delegates from foreign universities in seminars, practical training opportunities (both local and abroad) to increase the level of skill and competency of the Association.

Promote mutual visits and reciprocity among member organizations, inventors, and manufacturers to strengthen not only multilateral relations but also cultural ties between member countries.

Raise the level of invention and innovation to international standards and implement stringent measures to protect the inventors' creation in the field of intellectual property.

Establish educational research, development centers, international forums lectures, conference, etc.

## Purpose

To promote collaboration and interdisciplinary research among students and faculty members from different academic disciplines.

To provide opportunities for members to attend and present research at national and international conferences and workshops.

To provide opportunities for members to attend and present their invention at national and international event in invention and innovation.

To encourage the development of innovative and sustainable technologies, products, and solutions that address societal challenges and improve quality of life.

To foster entrepreneurship and the creation of startups by providing resources, mentorship, and networking opportunities for members.

To advocate for policies and initiatives that support innovation and research in the education system and beyond.

To engage with industry partners and external stakeholders to facilitate knowledge transfer, technology transfer, and commercialization of research outcomes.

To organize educational and outreach activities that promote science, technology, engineering, and mathematics (STEM) education and inspire the next generation of innovators and researchers.

To collaborate with other associations, organizations, and institutions that share similar goals and interests to advance the field of invention, research, and innovation.



## Kaohsiung Invention and Design Expo - KIDE



Taiwan is known for its strong culture of innovation and its well-established technology industry, which includes leading electronics manufacturers, such as Taiwan Semiconductor Manufacturing Company (TSMC) and Hon Hai Precision Industry (Foxconn). In 2022, Taiwan's innovation landscape continued to thrive, driven by a range of factors, including government support, strong research and development capabilities, and a highly skilled workforce.

One area of innovation where Taiwan has been particularly active is in the development of emerging technologies, such as artificial intelligence (AI), the Internet of Things (IoT), and blockchain. In recent years, the Taiwanese government has implemented a range of policies and initiatives aimed at promoting the development and adoption of these technologies, including the establishment of research centers and funding for start-ups. As a result, Taiwan has become a hub for cutting-edge technology innovation and has attracted significant investment from global players in the tech industry.

Another area of innovation where Taiwan has shown strength is in the development of medical technology and biotech. In response to the COVID-19 pandemic, Taiwan's biotech industry has been instrumental in developing new vaccines and treatments, as well as in providing critical supplies, such as personal protective equipment (PPE). In addition, Taiwan's healthcare system is highly advanced, with a strong focus on preventative medicine and an extensive network of hospitals and clinics. This has created a favorable environment for the development of new medical technologies and has positioned Taiwan as a key player in the global healthcare industry.

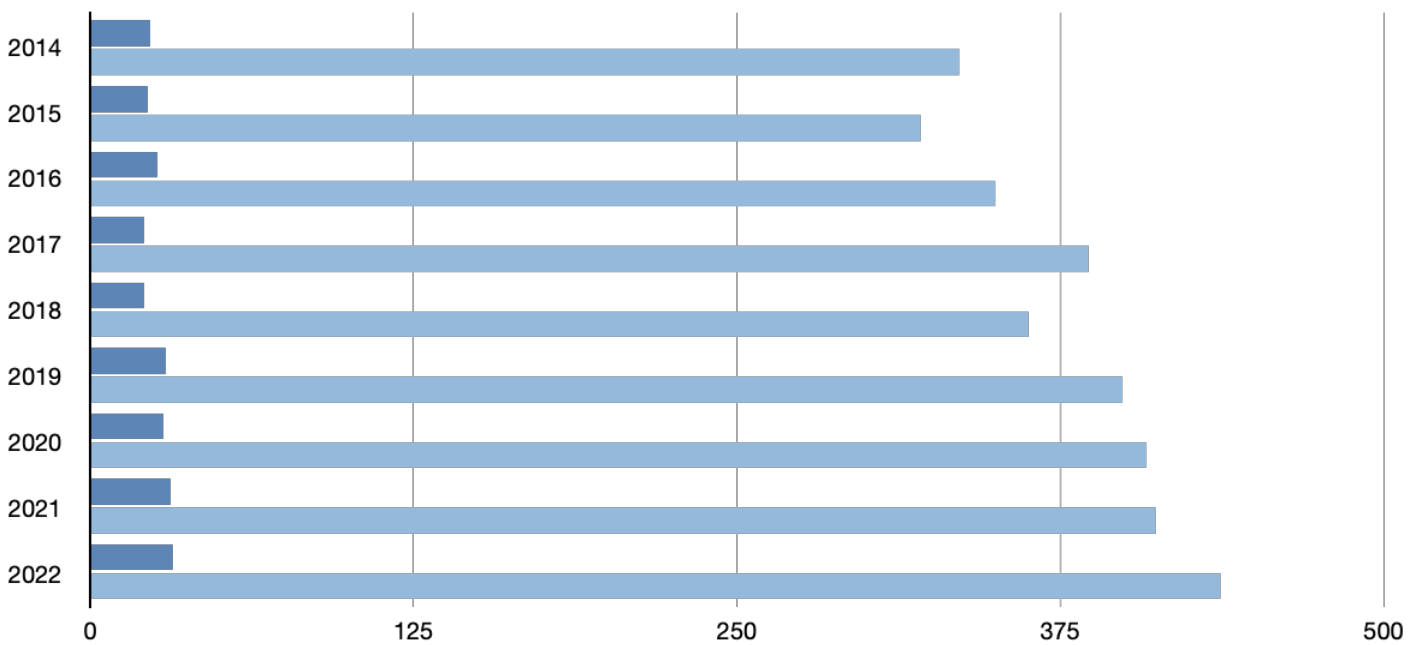
### Kaohsiung

Kaohsiung is a major city located in southern Taiwan and is the third-largest city in the country. It is an important economic center and home to a range of industries, including petrochemicals, steel, and shipbuilding. In recent years, Kaohsiung has also become known for its focus on innovation and sustainability, with a range of initiatives aimed at promoting green energy and smart city technologies.



Country

Project



Statistics of the KIDE



# The challenge of Artificial Intelligence and Intellectual Property

***Abstract:***

Artificial intelligence (AI) is transforming the world of intellectual property (IP) by increasing the speed and efficiency of the creation, protection, and enforcement of IP rights. AI is being used in various fields such as music, literature, art, and science to generate new works, assist in legal analysis, and identify infringing content. This paper aims to explore the impact of AI on IP, including the benefits and challenges associated with its use. Additionally, this paper also discusses the ethical and legal implications of AI-generated works, such as ownership and liability issues.

**Introduction:**

Artificial intelligence (AI) is transforming the world of intellectual property (IP) by increasing the speed and efficiency of the creation, protection, and enforcement of IP rights. AI is being used in various fields such as music, literature, art, and science to generate new works, assist in legal analysis, and identify infringing content. This paper aims to explore the impact of AI on IP, including the benefits and challenges associated with its use. Additionally, this paper also discusses the ethical and legal implications of AI-generated works, such as ownership and liability issues.

Intellectual property (IP) is a crucial aspect of modern business and technology. IP rights allow creators and innovators to protect their creations and inventions, enabling them to profit from their hard work and incentivizing them to continue innovating. However, as technology continues to advance, so do the challenges facing IP protection. Artificial intelligence (AI) is one such technology that is transforming the landscape of IP, revolutionizing how creators and innovators create, protect, and enforce their IP rights.

**Impact of AI on IP:**

AI is already being used in various fields to generate new works and assist in legal analysis. For example, in the music industry, AI-generated music is becoming more prevalent. AI algorithms can analyze large datasets of existing music and create new compositions based on patterns and trends in that data. This has the potential to revolutionize music creation, allowing for a more efficient and diverse range of compositions.

In literature, AI algorithms can be used to generate new texts. For example, GPT-3, a language model developed by OpenAI, can generate coherent and fluent text that is difficult to distinguish from text written by a human. While this technology has potential applications in many fields, it also raises questions about the ownership of AI-generated works. Who owns the copyright for an AI-generated novel or song? Should the creator of the AI algorithm be considered the author, or is it the AI itself?

AI is also being used to assist in legal analysis, helping lawyers and judges to identify relevant case law, statutes, and regulations. This can increase the speed and accuracy of legal analysis, making the process more efficient and effective. Additionally, AI is being used to identify infringing content online, helping to enforce IP rights and prevent piracy.



ChatGPT is an artificial intelligence chatbot developed by OpenAI and launched in November 2022. It is built on top of OpenAI's GPT-3 and GPT-4 families of large language models and has been fine-tuned using both supervised and reinforcement learning techniques.

**Benefits and Challenges:**

The use of AI in IP has many potential benefits, including increased efficiency, speed, and accuracy in the creation, protection, and enforcement of IP rights. AI can also help to reduce costs, making IP protection more accessible to small and medium-sized enterprises. Additionally, AI-generated works have the potential to increase diversity and creativity in various fields, such as music and literature.

However, the use of AI in IP also presents several challenges. One major challenge is the issue of ownership and liability. As mentioned earlier, it is unclear who owns the copyright for AI-generated works, and there is a risk that AI-generated works may infringe on existing IP rights. Additionally, there is a risk that AI-generated works may be biased or discriminatory, perpetuating existing inequalities in society. For example, an AI-generated recruitment tool may perpetuate gender or racial bias if it is trained on biased data.

**Ethical and Legal Implications:**

The use of AI in IP also raises several ethical and legal implications. For example, it raises questions about the responsibility and accountability of AI creators and users. Who is responsible for the actions of an AI system that infringes on IP rights? Should the AI creator be held liable, or is it the user who is responsible for how the AI is used?

Additionally, the use of AI in IP raises questions about the potential for AI to replace human creativity and innovation. While AI can generate new works, it does not have the same subjective experience as a human creator, and there is a concern that AI-generated works may lack the emotional depth and cultural context that is essential for human creativity. Furthermore, there is a risk that the use of AI in IP may lead to a concentration of power and wealth in the hands of a few dominant players, who can afford to invest in and control AI technology.

Another ethical concern is the potential for AI-generated works to infringe on the rights of others. For example, an AI-generated song may use a sample or melody from an existing copyrighted work without permission. Similarly, an AI-generated text may include content that infringes on someone else's trademark or publicity rights. It is important to ensure that AI-generated works do not violate the rights of others, and that the creators and users of AI technology are held accountable for any such violations.

**Conclusion:**

In conclusion, the impact of AI on the world of intellectual property is complex and multifaceted. While AI has the potential to revolutionize the creation, protection, and enforcement of IP rights, it also presents several challenges and ethical and legal implications. It is important for policymakers, IP practitioners, and AI developers to work together to address these issues and ensure that AI technology is used responsibly and ethically in the realm of intellectual property. Ultimately, the responsible and ethical use of AI in IP has the potential to benefit society as a whole by promoting innovation, creativity, and economic growth.

# Trademarks in the metaverse

The metaverse is an emerging virtual world where people and businesses can engage with each other and digital assets in a three-dimensional environment. As the metaverse continues to grow, the issue of trademark protection becomes increasingly important. Trademarks are a form of intellectual property protection that allow businesses to safeguard their brand identity and prevent others from using their trademarked names or logos without consent. However, enforcing trademark rights in a decentralized environment like the metaverse presents unique challenges. This paper will examine the use of Non-Fungible Tokens (NFTs) as a potential solution for managing trademarks in the metaverse.



# METAVERSE

The registration process for trademarks in the metaverse is similar to that of physical trademarks. Businesses or individuals may submit a trademark application to the relevant authority, such as the World Intellectual Property Organization (WIPO). If approved, a trademark registration certificate will be issued. However, enforcing trademark rights in the metaverse can be difficult due to its decentralized nature. Virtual goods can be easily duplicated, making it challenging to prevent others from using similar designs or logos. It appears that companies are filing for protection in relation to the following classes of goods - downloadable virtual goods, namely computer programs (class 9), retail store services featuring virtual goods (class 35), entertainment services (class 35), on-line non downloadable virtual goods and NFTs (class 42), and financial services, including digital tokens (class 46). When these applications are reviewed by multiple trademark offices, the descriptions of goods and services, as well as classification issues, are expected to become more standardized, and these standards will serve as a guide for future applicants.

One potential solution to these difficulties is the use of NFTs. NFTs are a unique form of digital asset that provides proof of ownership and authenticity. By registering trademarks as NFTs, businesses can create a decentralized and immutable record of their intellectual property rights. This could help prevent infringement and provide a more secure and transparent method of managing trademarks in the metaverse.

Another advantage of using NFTs for trademark protection is that they can be easily transferred between owners. In the metaverse, where virtual goods are often bought and sold, this can be particularly useful. Furthermore, the use of NFTs could create a new revenue stream for businesses as they could sell their trademarked digital assets to others.

While NFTs offer a promising solution to trademark protection in the metaverse, there are still challenges that businesses face when trying to trademark their brand in this virtual world.

One of the main challenges is the lack of clear regulations and legal frameworks surrounding trademarks in the metaverse. As the metaverse is a new and rapidly developing concept, there is a lack of established rules and laws that businesses can rely on to protect their trademarks. This uncertainty can create a risk for companies that want to trademark their brand in the metaverse.

Another challenge is the difficulty in enforcing trademark rights in a decentralized environment. In the metaverse, it can be challenging to track down infringing parties, making it difficult to enforce trademark rights. This can lead to a lack of protection for a company's brand in the metaverse, making it less attractive for businesses to invest in trademarking in the metaverse.

Additionally, some companies may choose to avoid trademarking in the metaverse altogether due to concerns over brand dilution or brand association. The metaverse is a largely unregulated space, and businesses may be hesitant to have their brand associated with potentially harmful or inappropriate content. Companies may also be concerned that allowing others to use their trademarked brand in the metaverse could dilute the brand's value or lead to a loss of control over their brand identity. Furthermore, some companies may choose to avoid trademarking in the metaverse due to the relatively small size of the market. The metaverse is still in its early stages of development, and the size of the market may not yet be large enough to justify the cost of investing in trademark protection.



## Conclusion

While NFTs offer a promising solution to trademark protection in the metaverse, there are still challenges and uncertainties that businesses face when trying to trademark their brand in this virtual world. The lack of clear regulations, difficulty in enforcing trademark rights, concerns over brand dilution or association, and the relatively small size of the market may all contribute to why some companies choose to avoid trademarking in the metaverse. Further research and development in this area are needed to create a more robust and secure framework for trademark protection in the metaverse, making it more attractive for businesses to invest in their brand identity in this new virtual world.



# Digital Economy in Middle East



The digital economy in the Middle East region is growing at a rapid pace, fueled by high mobile and internet penetration rates, a young and tech-savvy population, and government support for digital transformation. The digital economy in the Middle East and North Africa (MENA) region is expected to reach \$100 billion by 2020, with e-commerce being one of the most significant drivers of growth. This paper aims to provide an in-depth analysis of the state of the digital economy in the Middle East, its future prospects, and investment opportunities.

## Current State of the Digital Economy in the Middle East

## summarizing the expected growth of the digital economy in the Middle East

The digital economy in the Middle East is on the rise, driven by the rapid adoption of digital technologies by businesses and the growing popularity of e-commerce. According to a report by PwC Middle East, the e-commerce market in the Middle East is expected to grow from \$26.9 billion in 2018 to \$48.8 billion by 2022, with the UAE and Saudi Arabia being the largest e-commerce markets in the region.

In addition, the adoption of digital technologies such as artificial intelligence (AI), the Internet of Things (IoT), and cloud computing has been on the rise in the Middle East. According to a report by MarketsandMarkets, the Middle East and Africa (MEA) cloud computing market is expected to reach \$31.4 billion by 2022. The report also predicts that the MEA IoT market will grow from \$5.2 billion in 2017 to \$17.7 billion by 2023.

Future of the Digital Economy in the Middle East:

The digital economy in the Middle East is expected to continue its growth trajectory in the coming years. According to a report by McKinsey & Company, the region has the potential to become a leading digital economy, with e-commerce, digital media, fintech, and healthtech being the most promising sectors for growth. The report predicts that the digital economy in the Middle East and North Africa (MENA) region could reach \$200 billion by 2025.

Investment Opportunities in the Middle East:

There are significant investment opportunities in the digital economy in the Middle East. E-commerce, digital technologies, and fintech are some of the most promising sectors for investment. The UAE, Saudi Arabia, and Egypt are among the most attractive destinations for investment, with supportive government policies and a favorable business environment. According to a report by Magnitt, a startup data platform, the UAE and Saudi Arabia accounted for 75% of all startup funding in the Middle East in 2020.

Sector	Expected Growth by 2025
E-commerce	\$48.8 billion in 2022 to \$80 billion
Digital Media	\$4.4 billion in 2017 to \$9.1 billion
Fintech	\$2.2 billion in 2018 to \$2.5 billion
Healthtech	\$1.1 billion in 2017 to \$2.4 billion

As the table shows, there is significant potential for growth in each of these sectors, and investors looking for high-growth opportunities should consider the Middle East as a destination for their investments.



## Conclusion

The digital economy in the Middle East is on the rise, driven by the growing adoption of digital technologies and the popularity of e-commerce. The region has significant potential for growth in the coming years, with e-commerce, digital media, fintech, and healthtech being the most promising sectors. Investors looking for high-growth opportunities should consider the Middle East as a destination for their investments.

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# Innovation in Fashion Industry

The fashion industry is among the most dynamic and constantly evolving industries. Every season, fashion designers come up with new designs and styles that set the trend for the year. With the increasing pace of technology, the fashion industry is also adapting to new changes to improve the production process and create better products. In this report, we will discuss the latest innovations in the fashion industry.



## **Sustainable Fashion**

Sustainable fashion is one of the most prominent trends in the fashion business. Consumers are becoming more aware of the impact of fast fashion on the environment, and they are demanding products that are sustainable and eco-friendly. Many fashion brands are responding to this trend by adopting sustainable practices in their production process. For instance, H&M launched its Conscious Collection, which features clothing made from sustainable materials such as organic cotton and recycled polyester. In addition, many brands are also focusing on reducing their carbon footprint by using renewable energy sources in their production process.

## **3D Printing**

3D printing is one of the most revolutionary technologies that has been adopted by the fashion industry. This technology allows designers to create intricate designs and patterns that would be impossible to achieve using traditional methods. It also enables designers to create customized clothing that fits perfectly. Several fashion brands, such as Adidas, Nike, and Under Armour, have already started using 3D printing to create prototypes and final products.

## **Augmented Reality**

Augmented reality is another technology that is transforming the fashion industry. Many fashion brands are using augmented reality to enhance the shopping experience for their customers. For instance, Sephora launched an augmented reality feature on its app that allows customers to try on different makeup looks virtually. Similarly, H&M also launched an AR feature that allows customers to try on virtual clothes before making a purchase. This technology has the potential to revolutionize the online shopping experience and make it more interactive.

## **Smart Clothing**

Smart clothing is another innovation that is gaining popularity in the fashion industry. This technology enables clothing to interact with the environment and the wearer's body. For instance, some clothing brands have developed clothing that can track the wearer's heart rate and other vital signs. Smart clothing can also be used in sports to monitor the performance of athletes. For instance, Adidas has developed a smart shirt that tracks the wearer's heart rate, breathing rate, and other vital signs.

## **Artificial Intelligence**

Artificial intelligence is also transforming the fashion industry. Many fashion brands are using AI to analyze consumer data to understand their preferences and buying behavior. This information is then used to create personalized recommendations for each customer. AI can also be used in the design process to create unique designs based on consumer preferences. For instance, H&M used an AI algorithm to create a collection of dresses that were customized based on consumer data.

## **Digital Printing**

Digital printing is another technology that is transforming the fashion industry. This technology allows designers to create intricate designs and patterns on fabric using digital printers. This process is faster and more efficient than traditional printing methods, and it also allows designers to create designs with more detail and accuracy. Digital printing is also more eco-friendly than traditional printing methods as it requires less water and energy.

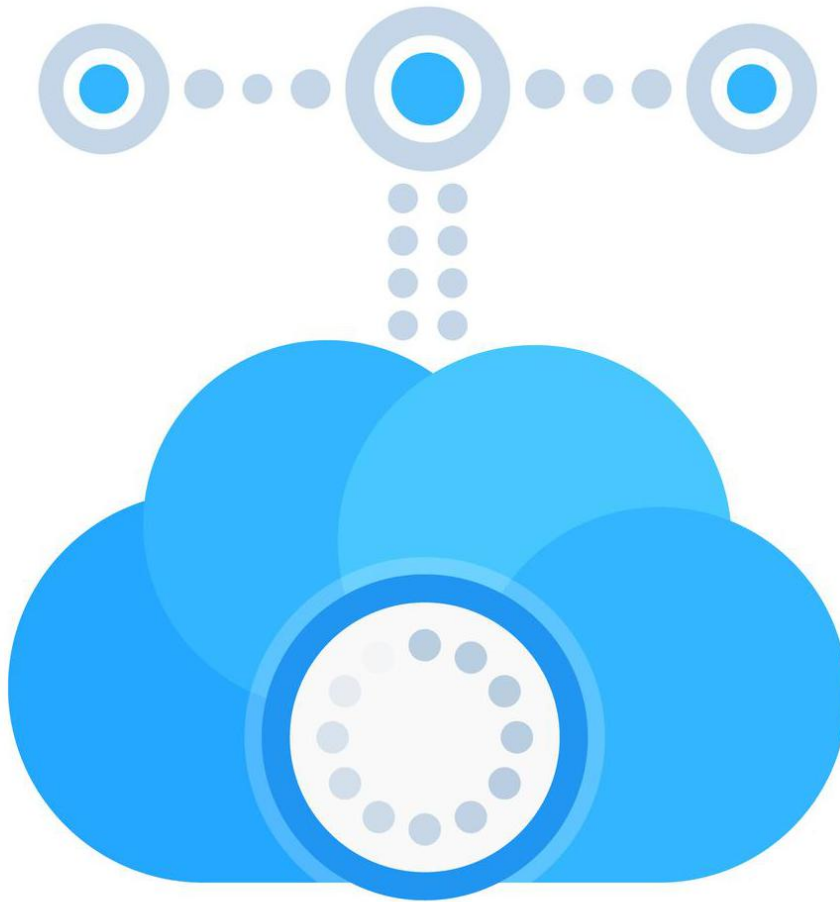
## Conclusion

The fashion industry is evolving rapidly, and new innovations are emerging every day. Sustainable fashion, 3D printing, augmented reality, smart clothing, artificial intelligence, and digital printing are some of the latest innovations that are transforming the industry. These technologies are making the production process more efficient, creating new design possibilities, and enhancing the shopping experience for consumers. As the industry continues to adapt to new changes, we can expect to see even more exciting innovations in the future.



# Edge Computing

*Exploring the potential of edge computing to enable faster and more efficient data processing, particularly for applications that require real-time processing.*



Edge computing is an emerging technology that involves processing data closer to the source, rather than sending it to a centralized data center for processing. By moving data processing to the "edge" of the network, edge computing can enable faster and more efficient data processing, particularly for applications that require real-time processing.

One of the main advantages of edge computing is its ability to reduce latency, or the delay between when data is generated and when it's processed. This is particularly important for applications that require real-time data processing, such as autonomous vehicles, industrial control systems, and remote healthcare monitoring. By processing data locally, edge computing can reduce latency to just a few milliseconds, which can be critical in situations where even a small delay can have serious consequences.

Another advantage of edge computing is its ability to reduce network bandwidth requirements. By processing data locally, edge computing can filter out irrelevant data and send only the most important information to the cloud for further processing. This can reduce the amount of data that needs to be transmitted over the network, which can be particularly beneficial in situations where network bandwidth is limited or expensive.

Edge computing is being used in a variety of industries and applications, including:

- **Industrial IoT:** Edge computing is being used to monitor and control industrial processes in real-time, improving efficiency and reducing downtime.

- **Autonomous vehicles:** Edge computing is being used to process sensor data from autonomous vehicles in real-time, allowing them to make split-second decisions based on the latest information.

- **Healthcare:** Edge computing is being used to monitor patients in real-time, allowing healthcare providers to respond quickly to changes in their condition.

- **Retail:** Edge computing is being used to analyze customer data in real-time, allowing retailers to offer personalized recommendations and improve the customer experience.

Despite its many advantages, edge computing also presents some challenges, including security concerns and the need for standardization across different edge computing platforms. However, as the technology continues to evolve and mature, it has the potential to transform many industries and enable a new generation of real-time applications.



# Mixed Reality

*Exploring the latest developments in technology that blends the physical and virtual worlds, and its potential applications in fields such as education, entertainment, and architecture*



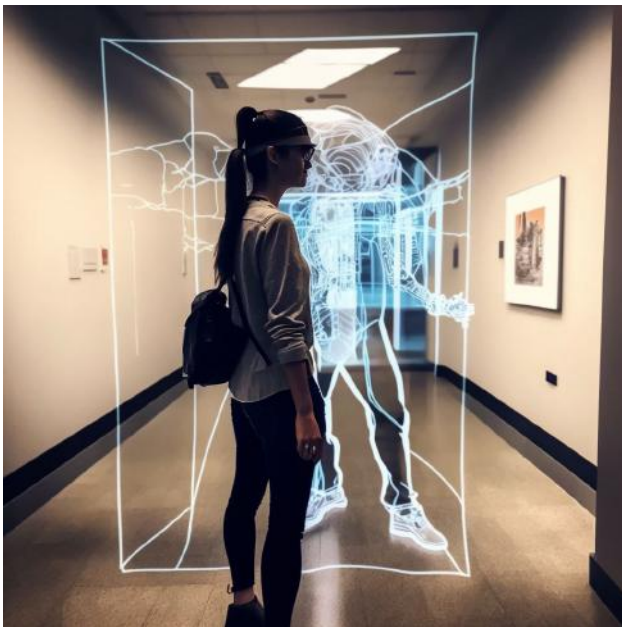
Mixed reality is an emerging technology that combines elements of virtual reality (VR) and augmented reality (AR) to create immersive experiences that blend the physical and virtual worlds. Mixed reality is achieved using specialized hardware such as headsets, and it has potential applications in a variety of industries including education, entertainment, and architecture.

One of the key advantages of mixed reality is its ability to create immersive educational experiences. Mixed reality allows students to explore virtual worlds and interact with digital objects in a way that was previously impossible. For example, a mixed reality application could allow students to explore the human body in 3D, providing a much more immersive and engaging experience than traditional textbooks or videos. Mixed reality can also be used to create virtual classrooms that allow students from around the world to collaborate and learn together.

Mixed reality also has potential applications in entertainment, particularly in the gaming industry. Mixed reality games can create immersive experiences that go beyond what's possible with traditional video games. For example, a mixed reality game could allow players to interact with virtual objects in a real-world environment, or to explore virtual worlds that are overlaid on top of the physical world.

In the architecture industry, mixed reality can be used to create immersive visualizations of building designs. This allows architects and builders to see how a building will look and function before it's constructed, which can help identify potential problems and improve the design. Mixed reality can also be used to create virtual walkthroughs of buildings, allowing clients to explore the design in a much more immersive way than traditional 2D blueprints or computer models.

There are several different types of mixed reality, each with its own unique characteristics and potential applications. These include:



**Augmented reality (AR):** AR involves overlaying digital content onto the real world. AR can be used for a variety of applications, including education, entertainment, and advertising.

**Virtual reality (VR):** VR involves creating a completely immersive virtual environment. VR is often used in gaming and entertainment, but it also has potential applications in fields such as education and healthcare.

**Mixed reality (MR):** MR involves blending the physical and virtual worlds to create immersive experiences that go beyond what's possible with AR or VR alone. MR has potential applications in a wide variety of industries.

As mixed reality technology continues to evolve, it's likely that we'll see even more innovative applications and use cases emerge. Mixed reality has the potential to revolutionize how we learn, how we work, and how we experience entertainment, and it's an exciting area of innovation to watch in the coming years.

# Licensing and Technology Transfer

*Examining the role of licensing and technology transfer in bringing new products and technologies to market, and the legal considerations involved*

Innovation is essential to success in today's rapidly evolving technological landscape. New products and technologies have the potential to transform industries as well as the way we live, work, and interact with the world. Getting a new product or technology to market, on the other hand, is typically a difficult and expensive process that requires significant investments in research and development, manufacturing, marketing, and distribution. Companies may overcome these constraints and bring new products and technologies to market faster and more efficiently by utilizing licensing and technology transfer.

In exchange for a fee or royalty, one corporation grants another the right to use its intellectual property (IP), such as patents, trademarks, copyrights, and trade secrets. Companies that have generated substantial intellectual property but lack the resources, expertise, or market presence to commercialize it may find licensing to be a viable choice. By licensing their intellectual property to other businesses, they can generate revenue, expand their market reach, and utilize the expertise of their partners to bring their products and ideas to market more rapidly and efficiently.

1. **Exclusive License:** An exclusive license grants the licensee the exclusive right to use the licensed IP in a specific field or geographic area. This type of license can be beneficial for licensees who want to prevent competitors from using the same IP, but it can also limit the potential market for the licensed product or technology.

2. **Non-Exclusive License:** A non-exclusive license grants the licensee the right to use the licensed IP, but does not prohibit the licensor from granting similar licenses to other parties. This type of license can be beneficial for licensees who want to avoid the cost and complexity of an exclusive license, but it may also result in increased competition and reduced profitability.

3. **Cross-License:** A cross-license is an agreement between two companies to license each other's IP. This type of license can be beneficial for companies that have complementary technologies or products, and can help to reduce licensing costs and increase the speed of product development.

4. **Sub-License:** A sub-license is a license granted by a licensee to a third party. This type of license can be beneficial for licensees who want to expand their market reach or generate additional revenue from their licensed IP.

Technology transfer is another strategy that businesses can use to bring new products and technologies to market.

Technology transfer involves the transfer of knowledge, expertise, and technology from one organization to another, typically from a research institution to a business.

Technology transfer can be beneficial for businesses that lack the resources, expertise, or access to cutting-edge research and development facilities necessary to develop new products and technologies themselves.

There are several different models of technology transfer, each with its own unique characteristics and legal considerations. These include:

1. **Licensing:** As discussed earlier, licensing is a key component of technology transfer, allowing businesses to access and utilize existing technologies developed by research institutions.

2. **Spin-Off Companies:** Spin-off companies are companies that are formed to commercialize technologies developed by research institutions. These companies are typically formed by researchers or entrepreneurs who have identified a market need for a particular technology.

3. **Joint Ventures:** Joint ventures are partnerships between research institutions and businesses that are formed to develop and commercialize new products and technologies. Joint ventures can be beneficial for businesses that want to share the risks and costs of product development, while also leveraging the expertise of research institutions.

4. **Collaborative Research Agreements:** Collaborative research agreements are agreements between research institutions and businesses to conduct joint research and development activities. These agreements can be beneficial for businesses that want to access cutting-edge research facilities and expertise, while also collaborating with research institutions to develop new products and technologies.

While licensing and technology transfer can be powerful strategies for bringing new products and technologies to market

# Volunteering Activity



Volunteering in the field of intellectual property and innovation is a great way to give back to your community while also gaining valuable experience in a rapidly growing industry. By volunteering with associations such as the World Invention Intellectual Property Associations (WIIPA), you can help support and promote the development of innovation and intellectual property rights around the world.





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